A.N.A.R.T.S. News Bulletin 1404 for 9th of July 2006

Views expressed in this news bulletin are not necessarily

those of the Broadcast Officer, the Relay Officers, or of

the Society.

Items in this broadcast include

1. Cols column

2. IPS REPORT

3. VK2SG RTTY DX report

4. OPDX News

5. Anarts Information

Col's Column

Propagation of Radio Waves.

Multi Hop Transmissions.

So far in this article we have only dealt with 'Single Hop'

transmissions, that is, those in which the wave makes only one

round trip between the earth and the ionosphere. The limiting

factor on single hop transmissions is the curvature of the earth,

and hence, indirectly, the angle of departure and arrival of the

radio waves from the transmitter and at the receiver.

A sketch showing the effect of the curvature of the earth will

be placed on Anarts Web site this weekend. The maximum distance

for a single hop transmission, in this sketch, is approximately

3200 Kilometres.

Communications beyond this distance are only possible by 'Multi

hop' transmissions in which the radio waves make two or more

symmetrical hops between the earth and the ionosphere in

travelling

from the transmitter to the receiver.

Multi hop transmissions are possible because radio waves which

strike the earth are reflected towards the ionosphere, the angle

of reflection being equal to the angle of incidence with which the

wave strikes the ground. However, the earth is not a perfect

conductor, and there is some loss of energy from the wave when

it comes in contact with the ground, this loss being in

addition to the ionospheric attenuation which takes place each

time the wave enters the ionosphere. Therefore it is desirable

that the wave makes a minimum number of hops between two points

when it is necessary to resort to multi hop transmission.

The number of hops taken by the radio waves in passing from one

point to another is related to the angle above the horizontal with

which the transmitting antenna radiates the waves. In general, for

long range communications, the radio waves having the least

attenuation are those radiated at an angle of the order of 10 to 20

degress above the horizontal.

Calculations of MUF for multi hop communications are based on the

number of predicted hops. Thus for two hop transmissions over 5000

Kilometres, the MUF is worked out on a basis of a skip distance of

2500 Kilometres and could be obtained directly from a simple graph.

Thats the end of this article for this week...Reference the RTTY

Contest, we now have 350 Email Logs and so far only 2
Postal Logs,

which shows how the Internet has changed our mail habits.
I have

converted 250 logs to the Cabrillo format to date.

One final thing which may come as a bit of a shock to our
regular

viewers/listeners, my XYL and myself will be returning to
the UK in

October. After 40 years in Australia I can hardly believe
it.

Hopefully we will come to our senses after a few months
and return

back here. Will tell you more about it next week.

73's for now Col VK2CTD.

IPS Weekly Solar and Geophysical Report 30th Jun

SUMMARY

Date 30 01
02 03 04
05 06

10cm flux 86 86
87 86 88
85 85

AFr index 7 3
1 2 11
18 12 est

Aaus index 7 4
2 2 8
13 7 est

T index 18 35
18 17 27
36 26

Solar flare activity was very low on 30/2nd low on 3/5th
and

moderate on 6th with one M2 flare.

Geomagnetic activity observed for the Australian Region
was quiet

to unsettled on 30th 4th and 6th quiet on 1/3rd and quiet
to

active on 5th.

Southern Australian Ionospheric F2 critical frequencies

were near

predicted on 30th and 2nd near predicted to 25 percent on
1st and

3rd mostly near predicted on 4th near predicted to 40
percent

enhanced on 5th and near predicted to 35 percent enhanced
on 6th.

Forecast for 7/13th Jul

Solar activity:
moderate activity is possible early in the week with

the chance of M-class flares while region 898 remains on
the disc.

Geomagnetic activity should see active conditions
expected for 9/10th

with the anticipated arrival of a glancing blow solar
wind shock,

mostly quiet to unsettled conditions otherwise.

Frequencies should be briefly depressed after local dawn
9/12th and

near predicted monthly values on other days.

courtesy of the IPS Radio and Space Services

summary by Pat VK2JPA ANARTS Broadcast Officer

VK2SG RTTY DX NOTES FOR WEEK ENDING 7 JUL

This week our information came from AA5AU GU0SUP I5FLN
UT5RP

and the Central Europe clusternode DB0SPC. Thank you all.

Friday 30

0000-14090 HI3TEJ

0046-14083 ZL3RG

1232-14084 BD7KLO

1348-14082 8Q7GE

1422-14084 IM0MBP

1816-14082 CN8IG

2124-14082 ZL3RG

2209-14082 LU8EGS

2250-14081 HK6PSG

2256-14088 OX3WS

2321-14084 9Z4FZ

2353--7047 YV5SSB

Saturday 1

0000-14085 HS0ZEE

0005-14081 CE1RQB

0026-14088 EA6BH

0043-14089 5F50KD

0045-14084 9Z4FZ

0123-14086 HK4QMH

0244-14079 VP2V/W7XU

0252-14081 EK6TA

0305-14086 UK8FF

0454-14085 5Z4DZ

0549-14084 5F50IG

0555-14091 SV9CVY

0843-21082 4Z5AV

1136.14104 ZL2AMI

1146-14076 HI3TEJ

1202-18103 8Q7GE

1220-14096 5F50KD

1223-14098 TF3KX

1228-21080 ZC4LI

1242-21081 9V1UV

1248-21086 7J1SJ

1256-28083 UA3QDX

1303-14098 5F50KD

1330-14096 MM0DHQ

1336-21088 JM1XCW

1343-21086 4L1QX

1426-14076 UN4PG

1454-14100 EI6HB

1516-14088 VR2XMT

1543-14089 4Z5AV

1601-14091 EW7EW

1619-14085 4X6UU

1743-28082 EA1AHY

1828-21082 HK6PSG

1854-14096 ES1GF

1858--7030 VR2XLN

1910-14080 HI3TEJ

1915-14085 N6KZB/XE2

1944-14091 LW1DXH

1947-14104 YV5AAX

2030-14096 LU4DX

2035-14088 CN8LI

2115-14086 TI2KAC

2141-14082 Z31MM

2205-14086 HK6PSG

2243-10140 T99D

2257-14089 5F50KD

2343-21084 ZL2AMI

2348-14096 LU3HS

2350-14080 HI3TEJ

Sunday 2

0003-14080 HI3TEJ

0004--7037 HK6PSG

0030-14075 E21YDP

0034-14096 VP2V/W7XU

0038-14084 XE3RCC

0105--7031 HI3TEJ

0107-14090 YB5AQB

0117-14085 DU1RB

0149--7049 HK4PSG

0156--7042 TG9ANF

0202-14087 ZL2AMI

0216-14087 4L1QX

0228--7050 XE3RCC

0457-14077 HI3TEJ

0525--7035 ZL2AMI

0534-14074 7Z1SJ

0544-21090 4L1QX

0616-21085 TU5JM

0617-14085 XE3RCC

0650-14093 ZC4LI

0712-14101 9M6XRO

0717-14094 6K2DFG

0722-21078 ZC4LI

0743-28082 LZ2DF

0748-21087 4X6UU

0802-28081 YM125ATA

0814-28080 TK/F6AUS

0914-28082 IS0BRQ

0922-21080 ER3ZZ

0926--7034 DV1JM

0944-21094 TK/F6AUS

0946-28087 7Z1SJ

0949-28095 SV9CVY

1038-28092 4X6UU

1047-14083 TF3KX

1312-14084 BD7KLO

1331-14086 VR2XMT

1558-18101 5F5ONK

1653-14086 OX3DB

1950-14085 5F50YZ

1959-14083 FG5FI

2017-14082 TI8CBT

2040-14083 5F50IG

2117-14081 EA8KV

Monday 3

0229-14085 VQ9LA

0314-14083 EK6TA

0318-14084 ZL3RG

0340-14081 9Z4FZ

0426-14087 4L4KK

1238-24923 3A2MW

1328-14085 VQ9LA

1658-14087 5F50YZ

1929-14087 EA6/I1RSA

1934-14081 YM125ATA

2022-14086 T94KC

2037-14080 7Z1SJ

2122-14084 OX3DB

2134-14087 5F50KD

2152-14091 CT3DL

2201-14083 FM5AA

2313-14082 TF3PPN

Tuesday 4

0006-14088 5F50KD

0108-14085 OX3WS

0118-14086 HK3SGP

0137-14093 SV9CVY

0318-14083 EK6YL

0956-14083 EK8SK

1158-14082 GI4WXA

1311-18105 5Z4DZ

1319-18103 TI8CBT

1339-18105 VQ9LA

1343-14083 BD7KLO

1409-14086 HZ1NH

1446-14083 9K2YM

1719-14084 YU6AO
Montenegro new DXCC

1945-14082 YM125ATA

2053-14087 EA9AK

2057-14083 HK6DOS

2119-14086 5F50IG

2137-14085 FG5FI

2254-14084 9Z4FZ

2332-18103 TG9AKH

Wednesday 5

0231-14083 FM5AA

0237-14082 ZL3RG

0458-14081 EK8SK

1651-14088 YU6AO
Montenegro

1859-14084 FG5FI

1904-14087 EA8RA

2050-14082 YM125ATA

2130-14082 FM1HN

2219-14080 YV1FM

2245-14082 ZL3RG

2250-14090 5F50KD

2324-14085 EA6BH

Thursday 6

0017-14086 HK4QMH

0116-14089 XE1ZVO

0426-14084 KH6ZM

0520-14084 EW3LW

1527-18105 5Z4ES

1628-14084 EK8WA

1635-14086 4K5D

1640-14086 TF3PPN

1657-14085 5F50IG

1845-14084 CE3FCF

2122-14083 5F50YZ

2143-14087 OX3WS

2223-14093 FG5FI

Notes of Interest

The VK2SG RTTY DX NOTES are distributed every week via the

Winlink network and are also available on the Internet at

URL http://mailman.qth.net/mailman/listinfo/vk2sg-rtty.

For next week's bulletin, send your bandpass and notes of

interest to Don AA5AU aa5au at bellsouth.net

Goetz Linss DJ3IW

The Ohio/Penn DX Bulletin No. 765 - excerpts

ARRL Membership Services Manager Wayne Mills, N7NG, reports that the

ARRL 'DXCC Dialog' blog debuted on Jun 26. He mentions that the 'DXCC

Dialog Weblog' contains news and notes about the ARRL DXCC program.

'This page will have up-to-date information about the DXCC program,'

says Wayne Mills, N7NG. 'It does not provide for users to post responses

but authors and e-mail addresses are listed.' The blog will be updated

as needed to inform and update the DXing community regarding news of

interest. DXCC Dialog Weblog is available at:

http://www.arrl.org/blog/DXCC/20Dialog

E5, NORTH AND SOUTH COOK ISLANDS

Victor ZK1CG/ZK1USA (now as of July 1st E51CG and E51USA), reports that

the callsign change from ZK1 for the North and South Cook Islands was

officially announced in the local newspaper 'Cook Islands News Daily' on

Jun 28. 'Please be advised that as of 1, Jul 06 UTC the International

Cook Islands Radio Callsign prefix ZK (Zulu Kilo) will be replaced with

E5 (Echo Five). This will mean that if your callsign is currently ZKR

(Zulu Kilo Romeo) it will now be E5R (Echo Romeo). Please note that only

the first two characters will change, the remainder will remain as is.

If you require further clarification please contact radio licensing

division at 29680 during working hours.' Papers Web page is

http://www.cookislandsnews.com

So, current callsigns ZK1CG and ZK1USA and ZK1JD will now change to E51CG,

E51USA and E51JD. Victor mentions that the local amateur radio operators

normally get a 2 letter suffix callsign while visiting Ham operators get a

3 letter suffix callsigns. Over the past weekend Jim E51JD, was heard on

20/15M SSB while Victor E51CG was heard on 10M SSB.

FM, MARTINIQUE

Sido F4CKP will be here for 2 months from Jul 3 and until end of Aug.

His activity will be on 80-10M including the WARC bands on RTTY and SSB.

He will use a FT-897 into a Cushcraft vertical and a G5RV antenna. QSL

direct via his home callsign or by the bureau.

HI3, DOMINICAN REPUBLIC

Mark KB2MS will be active as HI3/KB2MS from Puerto Plata starting Jul 28

until Aug 23. Activity will be on all bands except 160M. QSL via his

home callsign.

IOTA NEWS

EU-011. Dom M1KTA will activate St. Agnes Island as M1KTA/p between Jul

28 and Aug 4. His activity will include an entry in the RSGB IOTA Contest

on all bands CW/SSB. There is also the possibility that Dom might activate

St Marys, Tresco or Bryher islands during the same weekend. QSL via his

home callsign, direct or by the bureau.

NA-144. Six operators will activate Santa Cruz Island Jul 27-30. Their

activity will include the IOTA Contest. Operators mentioned are Ray/N6VR

Jim/N6KZ Fred/N6AWD Jim/WB9AWX Vic/KI6VC and Sreven/WA6SC. They will use

the callsign N6VR/P for the IOTA Contest and their home callsigns at

other times. They will have three stations active, one on the WARC bands

and two for the other bands. During the contest they will use a tri-band

yagi for SSB and amplifier and a vertical on CW. QSLs for N6VR and N6AWD

go to N6AWD. all others go directly to the operator's home address.

KH0, MARIANA ISLANDS

Operators Nao/JK1FNL Jim/7K4QOK and Takky/JE1KUC will be active from Saipan,

Nothern Mariana Islands (OC-086), Jul 7-10. They will operate as NA8O/KH0

(JK1FNL) KG8RP/KH0 (7K4QOK) and N1KU/KH0 (JE1KUC) and be active on 80-6M.

Also look for them to participate in the IARU HF World Championship.

QSL via their JA home callsigns, direct or by the bureau.

VE1, CANADA (IOTA Ops)

Len/VE9MY and Linda/VE9GLF will be vacationing in Nova Scotia during the

week of Jul 16. They plan to activate a few IOTAs in the Nova Scotia

Island groups (NA-081 NA-126 NA-127 and NA-154) during their week stay but

have not determined at this time the sequence of activation. They will

also try to activate new Canadian Islands whenever possible and any

lighthouses that are accessible. Operations will be mobile or portable

with 100 watts, on 20 and 40M. QSL via their home callsign, by the bureau

or direct.

YI, IRAQ

Carlos N4THW informs OPDX that he is in Iraq for the next four months on a

military air base. He states that he has already applied for YI license and

is expected to be on the air soon. He may sign YI/N4THW if the military

gives him approval. Carlos plans to be on all bands 80-10M including the

WARC bands. He currently is looking (for help) to find a good radio and

antenna. Right now all he has is an old military HF radio w/100 watts into

a G5RV dipole.

YJ, VANUATU

Remember to look for Tommy VK2IR to be active as YJ0IR from New Hebrides

OC-035 Jul 3-15. His activity will be on 80/40/20/17/15/12/10M SSB

depending on conditions. QSL via W3HNK.

Z2, ZIMBABWE

World-wide traveler Vladimir UA4WHX continues to be active as Z2/UA4WHX.

He was heard this past weekend on 80/40/30/20/17M CW. There were a few

SSB QSNs on 20/17M. The length of his stay or where he goes next is

unknown. QSL via UA4WHX.

ZA, ALBANIA (LH, WW Loc. and IOTA Ops)

A group of four Italian operators will be here Jul 7-17. Activity will be

on all bands HF and VHF CW SSB PSK31 and RTTY. They also plan to activate

lighthouses WW Loc.'s and be in the upcoming contests for HF/VHF (IARU HF

World Six Club Contest and CQ World-Wide VHF Contest). Operators mentioned

are Giuseppe/I2AZ Pino/I8YGZ Alfredo/IK7JWX and Giancarlo/IK7QMJ. All plan

to sign ZA/homecall. The group is currently waiting for permission to activate

Sazan Island (EU-169) plus the lighthouses on the island. QSL via their home

callsigns (via the ARI Bureau or direct using the (QRZ.com) address).

The Society can be contacted in the following ways

To Pat VK2JPA via patleeper at optusnet.com.au or

Col VK2CTD via ctdavies at bigpond.net.au or

you can drop a line to PO Box 93 Toongabbie NSW 2146.

73’s from Pat VK2JPA broadcast Officer

NNNN

end of broadcast, please standby for call backs taken by vk2ctd

cq cq de vk2tty vk2tty sk sk